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CONFIDENTIAL

FILE: H<sub>2</sub> GENERATOR

January 21, 1957

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Dear Sir:

*Re:*  
This letter report describes the work performed on Task Order No. C during December, 1956.

During this month, the experimental work under this Task Order was brought to a close, the layout for the proposed hydrogen generator was completed, and the preparation of the summary report was continued.

The experimental work was devoted to studies of the hydrolysis reactions using swamp waters. Five water samples were obtained from stagnant waters in the vicinity of [ ] these waters contained organic matter. When sodium borohydride was dissolved in each of these water samples, hydrogen was evolved immediately. In the case of one water sample, 18 per cent of the sodium borohydride was decomposed in 24.5 minutes. In a separate experiment, this water sample was made basic with 0.1M NaOH; then no hydrogen was evolved for a period of at least 30 minutes after the borohydride was added. It is inferred from these experiments that the catalytic impurities in stagnant water are likely to be acidic and, consequently, can be neutralized with a base.

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During your near-future visit, we shall describe and discuss the design of the proposed hydrogen generator with you in detail. We are quite enthusiastic about the generator design that has been conceived because it seems to fulfill your requirements so completely. We feel sure that you

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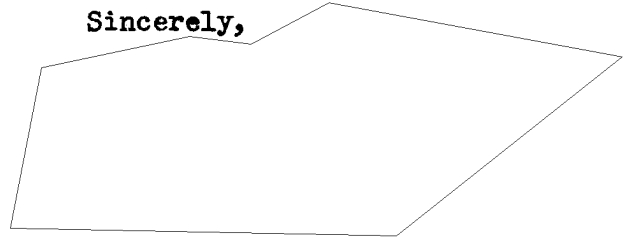
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January 21, 1957

will find the design equally encouraging.

The total appropriation on this Task Order was \$21,090. As of January 1, 1957, the unexpended balance was approximately \$1,500.

Sincerely,



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In Duplicate

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